

**ABSTRACT**

- 5           The identification of immunogenic peptides of PSA, nucleic acids coding therefor, and recombinant nucleic acids into which are inserted said nucleic acids coding for PSA peptides are disclosed. These peptides, nucleic acids and recombinant nucleic acids may be used in isolation, or as compositions thereof to modulate immune responses in animals. The
- 10 invention further encompasses methods *per se* of modulating immune responses in animals.